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Agriculture, Conservation, and the Environment: A Unified Policy

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Abstract
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AGRICULTURE, CONSERVATION, AND THE ENVIRONMENT: A UNIFIED POLICY

As another Farm Bill approaches in 1995, agricultural, conservation, and environmental groups will again negotiate domestic agricultural policies. From past meetings have come such compromise solutions as the Conservation Reserve Program (CRP) and conservation compliance. The upcoming Farm Bill debate could present a rather unique twist. The *Iowa Plan* (Iowa Farm Bill Study Team 1994), a proposal to reform federal farm policy, has the potential for substantial budget savings (a rarity in today's political society) over current programs. Thus, if the *Iowa Plan* is adopted, negotiations will turn to the appropriation of the budget savings. This paper demonstrates how these savings could be used to benefit agriculture, conservation, and the environment. Several market-driven approaches to address agricultural-environmental conflicts are presented. From these, a proposal is made to promote agriculture, conservation, and the environment through "green payments" from agriculture's budget savings under the *Iowa Plan*.

Green payments represent compensation for actions taken to uphold and/or improve the environmental quality of the land and other natural resources. Farmers, as stewards of the land, are active environmentalists, and thus, deserve recognition for their efforts. Green payments will serve as just rewards for environmental service. For conservation and environmental groups, green payments would represent agriculture's efforts to provide incentives for environmentally sound agriculture. Thus, all groups gain from a green payments strategy.

Market-Driven Policy Options

Conservation and environmental issues can be addressed through several market-driven policies. Hodge (1991) examines several alternative policy options. Besides government regulation, the government can approach environmental issues through taxes and subsidies, reductions in disincentives for environmental actions in other government policies, permits and quotas, legal liability, and environmental contracts.

The tax-subsidy approach to environmental policy implies that there are costs and/or benefits that are not properly incorporated into the market price of a commodity. If the production of a commodity leads to some environmental damage (improvement), then a tax (subsidy) should be placed upon that good. This approach attempts to value the environmental impact of the commodity and compensate for it. Some problems arise under this strategy; for example, the environmental impact value is hard to quantify, proxy variables must often be used to measure environmental effects, and the process by which the commodity affects the environment may not be completely understood. Many of these problems will also affect the other policy options proposed to address environmental impacts that are incidental to agricultural production.

The government can help conservation and environmental causes by reducing implied disincentives for environmental action in its policies. An example of a policy disincentive

is the current farm program combination of target prices and acreage reduction programs (ARPs). By holding target prices above market prices and requiring the farmer to set aside a given percentage of land while planting the rest to a specified crop, the combined policies create incentives for intensive monoculture. Under the *Iowa Plan*, both target prices (for deficiency payments) and ARPs are eliminated; thus, the *Iowa Plan* helps reduce environmental disincentives in agricultural policy by reducing incentives for intensive monoculture and encouraging biodiversity.

A permit-quota system can be set up to address environmental issues. This solution creates markets for environmental rights. The government sets a total level for an activity (quota) that affects the environment and permits are then issued to individual agents allowing them to conduct a specified level of the activity. The distribution of permits can be determined by auction, existing individual activity levels, or other means. To achieve the least-cost environmental impact, the permits should be transferable. The permit-quota system would face the same problems as the tax-subsidy strategy.

Legal liability would make it possible for agents to be liable for any environmental damage caused by their actions. This forces individuals to account for any environmental effects his/her actions might have. As one can imagine, there are many problems with environmental legal liability. Uncertainty abounds about the level of possible damage settlements, the tracing of environmental problems to a specific agent, and the concentration of damages over individuals (often, it would be widely dispersed).

Environmental contracts can also be employed to balance environmental concerns. The contracts specify the land owner's rights and responsibilities to the land and provide guidelines for reimbursement or payments for actions taken to uphold and/or improve the environmental quality of the land and other natural resources. Contracts could be individually negotiated and drawn up for a set time period. They could be targeted to specific environmental problems or to general environmental quality.

Choosing An Environmental Policy Structure

Hodge indicates six areas that must be considered when choosing an appropriate environmental policy structure: flexibility, targeting, information, incentives, transaction costs, and political considerations. The policy should be flexible, to allow agents a variety of options to achieve the specified environmental impacts at the least cost. The policy should be targeted with respect to a particular level of activity or geographic area. Adequate information should be provided to both the policymakers and the contracted agents. Incentives should be set to create the desired atmosphere for change without overcompensation. Transaction costs of the policy should be accounted for, including all government expenses for the program. Also, political considerations must be incorporated into the policy; a balance must be struck between agriculture and the environment.

As was mentioned previously, the *Iowa Plan* does serve the environment by reducing disincentives for environmental actions in U.S. agricultural policy. However, it has the potential to expand its conservation and environmental efforts while also providing the strongest support to agriculture through an enhanced environmental platform, more specifically through extended **environmental contracting and green payments**. U.S. agriculture has in some instances adopted environmental contracting; the CRP is a well-known example.

Under the *Iowa Plan*, the CRP is continued, although in a modified form, and agricultural programs could produce substantial budget savings over the current program structure. These savings would then be directed towards extending a modified CRP and other environmental enhancement programs. Several authors have proposed such an approach to agricultural environmental policy. Cook (1989) puts forth the Environmental Stewardship Program (ESP) as a successor to the CRP. The ESP is a modified CRP that allows for variations in land use, as opposed to a complete change in land use. Cook suggests ESP could consist of 10- to 15-year contracts that compensate farmers to perform some or all of these provisions:

1. Adjust planting on the farm to rotations that reduce erosion and the use of agrichemicals;

2. Modify agrichemical applications to reduce input usage and improve input efficiency;

3. Adopt long-term pest control including biological controls;

4. Modify agricultural practices to favor wildlife;

5. Experiment with alternative, sustainable farming practices; and

6. Adopt Best Management Practices for food safety and environmental concerns.

Payments would be based upon the farmer's costs and the production adjustment. These payments increase as farmers make more dramatic adjustments and farmers who are already producing under ESP practices could also be recognized and encouraged to continue through ESP contracts.

Rietveld (1993) has also suggested extending or expanding CRP. He notes that CRP has been a fairly popular program with environmentalists, conservation groups, and agricultural producers. As CRP has evolved, it has shifted to meet broader environmental goals and focused on more geographic targeting. Rietveld proposes this evolution of CRP should continue. Agricultural practices could be targeted to the introduction of filter strips, windbreaks, and terraces. Timely haying and grazing could be allowed as a cost efficient policy option.

Both of these proposals show how environmental contracting can be extended to fit the concerns of all groups. The green payments from such contracts recognize agriculture's efforts for the environment and provide incentives for even more effort. Programs such as ESP allow the farmer flexibility in terms of production adjustment and required actions. Conservation and environmental goals can be reached in the least-cost manner. ESP presents farmers with a selection of contract choices as opposed to the CRP set-aside. Contracts can be tailored to meet specific needs. Economic use of the land is not prohibited, but is only bounded in environmentally conducive ways. Thus, environmental contracting and green payments support agriculture, conservation, and the environment.

Several studies have shown extension or expansion of CRP would be received favorably by agricultural producers as illustrated in the review presented by Clark (1993). Studies indicate that many producers would continue in an extended CRP; and if limited haying and grazing were allowed, some producers would accept lower rental rates or conservation easements. Thus, there exists evidence that farmers would adopt flexible environmental contracting and green payments to a significant degree with enhancements to production agriculture and to the environment.

Summary and Recommendations

There are several ways to address environmental issues through market-driven mechanisms and incentive programs. Environmental contracting with green payments seems to be a most promising avenue for both agricultural and environmental interests. ESP contracting options could include CRP contracts with limited haying and grazing rights, and contracts for the adoption of buffer strips, terracing, and other best management practices. The *Iowa Plan*, in conjunction with a program such as ESP, could greatly benefit agriculture, conservation, and the environment at the same or lower costs to the government than the current program structure entails.

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